

REMARKS

Entry of the amendments is respectfully requested. Claims 1-31 are pending in the application. Claims 1, 20, 23, and 27 are amended, and new claim 32 is added. Favorable reconsideration and allowance of this application is respectfully requested in light of the foregoing remarks.

1. Objections to the Specification

The Examiner objected to the specification because of an informality. Specifically, the Examiner indicated that “improved” should be removed from the Abstract. Also, the Examiner indicated that a new title be given to the application that is more indicative of the claimed invention. The Applicants have amended the specification in accordance with the Examiner’s suggestions. Accordingly, withdrawal of the objections is respectfully requested. Other minor errors have been correct in claims 20 and 23.

2. Rejections of the Claims

a. Recapitulation of the Invention¹

The invention relates to a roller assembly configured to create a striping effect over a lawn. The roller assembly generally includes a tow arm having first and second links. The first link is configured to be supported at least indirectly on a frame of a lawnmower. The second link

¹ This Section 1 is intended to provide the Examiner with some background information on the state of the art and applicants’ contribution to it. It is *not* intended to distinguish specific claims from the prior art. That task is performed in Section 2 below.

is connected to a shaft mounted with one or more rollers. A spring is disposed between the first and second links and configured to bias the second link downwardly relative to the first link, thereby biasing the rollers against a ground surface. The roller assembly further includes a quick-connect assembly for rapid attachment and detachment of the roller assembly to the lawnmower. The roller assembly yet further includes a latch assembly configured to hold the second link and shaft of rollers in a raised position relative to the ground surface.

b. Indication of allowable subject matter

Applicants wish to thank the Examiner for the allowance of claim 31, and for the indication of claims 4-8, 11-15, 18-19, 26, and 28 as containing allowable subject matter if rewritten to overcome rejections under § 112, second paragraph, and in independent format including all of the limitations of the base claim and any intervening claims.

c. Rejections under 35 U.S.C. § 112

Claims 1-9 and 27 stand rejected under § 112, second paragraph, as being indefinite. In particular, the Examiner indicated that “the rear link” recited in claim 1 lacks sufficient antecedent basis. Also, the Examiner indicated that “the mounting bracket” recited in claim 27 lacks sufficient antecedent basis. Applicants have amended claims 1 and 27 to provide proper antecedent basis. Accordingly, withdrawal of the objections is respectfully requested.

d. Rejections under 35 U.S.C. § 102(b)

Claims 1-3, 9-10, and 20-25 stand rejected under § 102(b) as being anticipated by U.S. Patent 2,032,784 to Worthington. The Applicants respectfully traverse this rejection because, as is discussed below, the Worthington patent does not disclose each and every element of the novel subject matter disclosed and set forth in the claims. Therefore, reconsideration is in order and is respectfully requested.

Independent claim 1 recites a roller assembly for a lawnmower. The roller assembly includes a tow arm having first and second links. The first link has a rear end that is pivotally attached to a front end of the second link, and a front end configured to be supported at least indirectly on a frame of the lawnmower. The roller assembly further includes a shaft supported and at least indirectly coupled on the second link, and at least one roller disposed on the shaft. The roller assembly further includes a spring disposed between the first and second links and configured to bias the second link downwardly relative to the first link thereby to bias the roller against a ground surface.

The Worthington patent discloses a gang lawn mower having a gauge roller 4 mounted on a shaft 5 and supporting the front end of the mower from the ground surface (Col. 2, lines 25-38). The location of the gauge roller 4 relative to a cutter mechanism dictates the height of the grass (Col. 2, lines 43-50). The gang lawn mower further includes a helical spring 13 (Col. 2, line 54; Figure 4). Worthington discloses that the helical spring 13 serves to hold an actuating arm 9 against an adjustment T-hand 12, and to prevent accidental rotation of a wing nut configured to

control the position of the gauge member 4 with reference to the cutter mechanism, thus maintaining the desired cut height of the grass (Col. 3, lines 10-22).

The Worthington patent does not disclose a roller assembly of a lawnmower having a spring configured to bias a second link *downward* as recited by claim 1 thereby to bias a roller against the ground. Rather, Worthington discloses a lawnmower supported on a roller assembly selectively positioned to dictate the cut height of the grass. The helical spring 13 does not bias the roller against the ground. The Worthington spring maintains the desired cut height of the grass by restricting accidental change in a position of the rollers relative to the cutting mechanism, and by biasing the rollers from moving away from the cutting mechanism.

Worthington does not disclose a spring to bias a second link as recited by claim 1 thereby to bias the roller against the ground surface. Notably apparent from the drawings is that, if the Worthington lawnmower were to be lifted up from the ground surface, the spring 13 would bias the rollers *upward* and not downward toward the ground surface all claimed. Moreover, the alleged second link referenced by the Examiner on page 3 of the Office Action dated May 25, 2004 is a fixed component of the mower, and thus not moveable and not biased downward in any respect by the disclosed Worthington helical spring. Significantly, the alleged second link disclosed in Worthington is a bracket fixed to the side frame section of the lawnmower (Col. 2, lines 25-49; Fig. 4). The Worthington thus does not disclose each and every element of claim 1. Accordingly, Applicants respectfully request withdrawal of the rejection.

Dependent claims 2-3 and 9 are believed to be in condition for allowance for incorporating by reference the limitations of claim 1 and for defining additional features of the invention, which, when considered in combination with those of claim 1, are not anticipated by the prior art relied upon in the rejection. For example, the Worthington patent does not disclose a *torsion* spring as required by claim 2. The spring 13 is instead a *helical* spring.

Nor does Worthington disclose a quick connect assembly as recited in claim 1, where the quick connect assembly includes a rod mountable on one of a) the first link of the tow arm and b) the lawnmower frame, and a sleeve mounted on the other of the first link of the tow arm and the lawnmower frame, the sleeve configured to be inserted over the rod to thereby attach the tow arm to the lawnmower frame.

Claim 10 recites a roller assembly for attachment to a lawnmower. The roller assembly includes a shaft disposed in a lateral direction with respect to a ground surface, and at least one roller disposed on the shaft. The at least one roller is configured to contact and ride along the ground surface. The roller assembly further includes a tow arm to which said shaft is connected. The roller assembly further includes a quick connect assembly having a sleeve mountable to one of a) a front end portion of the tow arm and b) the lawnmower frame, and a rod mountable on the other of the front end portion of the tow arm and the lawnmower frame. The quick connect assembly is configured to thereby connect the tow arm to the lawnmower frame.

Worthington does not disclose a roller assembly having a quick connect assembly for attachment to a lawnmower. Rather, Worthington discloses a gauge roller assembly having rock

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shaft 7 journaled at the forward ends or brackets of the side frames of the lawnmower (column 2, lines 38-43). The Worthington rock shaft can be rotated to adjust the position of the gauge member with respect to the cutter mechanism, thus “changing the height of the cut” (column 2, lines 43-49). Thus, the rock shaft and gauge assembly support the lawnmower from the ground, and thus are not for quick attachment to a lawnmower. However, the rock shaft *cannot* be manipulated to selectively attach and detach a tow arm to a lawnmower frame. Therefore, the Worthington patent does not disclose each and every element of the claim 10. Accordingly, Applicants respectfully request withdrawal of the rejection.

Claim 16-17, 29, and 30 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,044,534 to Day et al. The Applicants respectfully traverse this rejection because, as is discussed below, the Day et al. patent does not disclose each and every element of the novel subject matter disclosed and set forth in the claims. Therefore, reconsideration is in order and is respectfully requested.

Claim 16 recites a roller assembly for attachment to a lawnmower. The roller assembly includes a plurality of rollers disposed on a shaft coupled to a tow arm at least indirectly supported by a lawnmower. The roller assembly further includes a latch assembly configured to be selectively engageable to latch a rear link to a front link of the tow arm in a manner that holds the roller assembly in a raised, inoperative position. The latch assembly includes a latch pin which is selective movable between a retracted-position where the latch assembly is disengaged to an extended position in which the latch assembly is engaged.

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Similar to the gauge assembly of the Worthington lawnmower, the Day et al. patent relates to a lawn mower 10 having a rear roller assembly 15 operable to dictate a location of a cut bar 24 and thus a cut height of a grass lawn (column 2, lines 8-10). The roller assembly supports the lawnmower on the ground (column 1, lines 62-67). The position of the rear roller assembly 15 is fixed by a plunger 114 engaged with one of a series of notches 112, thereby setting the cut height of the lawn (column 4, lines 1-8). The Day et al. patent does not disclose a roller assembly for attachment to a lawn mower in the manner claimed. Moreover, the Day et al. patent does not disclose a latch mechanism configured to hold the roller assembly in a stowed, non-operative position. The plunger and related components that allegedly correspond to the claimed notches cannot hold the roller assembly in a stowed, non-operative position as recited by claim 16. To the contrary the rear roller assembly is structurally essential to support the lawn mower on the lawn (column 1, lines 62-67). Day et al. thus does not disclose each and every element of the claimed invention.

Claim 23 is believed allowable for reasons similar to those described above for claim 10. Worthington does not disclose a lawnmower that includes a roller assembly having a tow arm, and a quick connect assembly configured to selectively attach the tow arm of the roller assembly to the frame of the lawnmower. Rather, Worthington discloses a gauge roller assembly that supports the lawnmower from the ground and that regulates the cut height of the grass lawn (See column 2, lines 38-50). Therefore, reconsideration is in order and is respectfully requested.

Claim 29 is believed allowable for reasons similar to those recited for claim 16. Day et

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al. does not disclose a lawnmower that includes, amongst other things, a roller assembly having a latch assembly that is located between front and rear links of a tow arm and that is selectively engageable to latch a roller assembly in a raised, inoperative position in which the rollers are incapable of rolling along a ground surface. In addition, Day et al. does not disclose a a spring which is disposed between front and rear links and which is configured to bias the roller assembly toward a lowered position in which the rollers can roll along a ground surface. The Day et al. patent thus does not disclose each and every element of the novel subject matter disclosed and set forth in claim 29. Therefore, reconsideration is in order and is respectfully requested.

Claim 31 is believed allowable for reasons similar to those recited for claim 16. Day et al. does not disclose a lawnmower that includes, among other things, a roller assembly with a quick connect assembly having a rod mounted on one of a) the front link of the tow arm and b) the lawnmower frame, and a sleeve mounted on the other of the front link of the tow arm and the lawnmower frame, the sleeve configured to be selectively inserted over the rod to thereby attach the tow arm to the lawnmower frame, and a hitch pin configured to selectively hold the sleeve on the rod. Rather, Day et al. discloses a lawn mower having a roller assembly that supports the lawnmower from the ground and regulates the cutting height of the grass lawn. The roller assembly is thus not selectively mounted by a quick connect assembly to a tow arm to a lawnmower frame. Also, Day et al. does not disclose a spring coupled to bias the roller assembly *downwardly* toward a ground surface. Still furthermore, Day et al. does not disclose a handle

attached to the rear link of the tow arm, the handle configured to be actuatable to lift the roller assembly to a raised, inoperative position. Still furthermore, Day et al. does not disclose a latch assembly configured to be selectively engageable to hold the roller assembly in a raised, the inoperative position thereof. The Day et al. patent thus does not disclose each and every element of the novel subject matter disclosed and set forth in claim 31. A review of the other cited references fails to teach or suggest this patentable subject matter. Therefore, reconsideration is in order and is respectfully requested.

3. New Claim

New claim 32 recites a roller assembly for a lawnmower that includes a tow arm having first and second links. The first link has a rear end that is pivotally attached to a front end of the second link and has a front end configured to be supported at least indirectly on a frame of a lawnmower. The roller assembly further includes a shaft supported and at least indirectly coupled on the second link, and at least one roller disposed on the shaft. The roller assembly further includes a spring disposed between the first and second links and configured to bias the second link downwardly relative to the first link thereby to bias the roller against a ground surface. Claim 32 further recites that the roller assembly is incapable of dictating a cut height of the lawnmower. This characteristic is inherent in the disclosed floating roller assembly. A review of the cited references fails to teach each and every element of claim 32. Therefore, allowance of claim 32 is respectfully requested.

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CONCLUSION

It is submitted that claims 1-32 are in compliance with 35 U.S.C. § 102 and each defines patentable subject matter. A Notice of Allowance is therefore respectfully requested.

A fee in the amount of \$86 in excess of three for the submission of one new independent claim. Nevertheless, should the Examiner consider any other fees to be payable in conjunction with this or any future communication, the Director is authorized to direct payment of such fees, or credit any overpayment to Deposit Account No. 50-1170.

The Examiner is invited to contact the undersigned by telephone if it would help expedite matters.

Respectfully submitted,



Timothy Newholm
Registration No. 34,400

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BOYLE, FREDRICKSON, NEWHOLM,
STEIN & GRATZ, S.C.
250 Plaza, Suite 1030
250 East Wisconsin Avenue
Milwaukee, WI 53202
Telephone: (414) 225-9755
Facsimile: (414) 225-9753